96 Formalize and disprove the statement “There is a natural number that is not equal to any natural number.”.

After trying the question, scroll down to the solution.

§ $\exists n: nat\cdot \forall m: nat\cdot n \neq m$

Leaving the domain *nat* implicit,

	$\exists n\cdot \forall m\cdot n \neq m$	specialization: replace m with n
$\Rightarrow$	$\exists n\cdot n \neq n$	$\neq$ is irreflexive
$=$	$\exists n\cdot \bot$	Identity
$=$	$\bot$	